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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,331	03/24/2004	Ping Sheng	016660-213	4022
21839	7590	10/19/2005	EXAMINER	
BUCHANAN INGERSOLL PC (INCLUDING BURNS, DOANE, SWECKER & MATHIS) POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404			BONCK, RODNEY H	
			ART UNIT	PAPER NUMBER
			3681	

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/807,331

Applicant(s)

SHENG ET AL.

Examiner

Rodney H. Bonck

Art Unit

3681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 9-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

The following is a first action on the merits of application Serial No.10/807,331, filed March 24, 2004, and is in response to applicant's election filed September 29, 2005.

Election/Restrictions

Claims 9-14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on September 29, 2005.

Specification

The disclosure is objected to because of the following informalities:

In line 10 of page 2 of the specification, it appears that "and" should be – any --.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Klass et al.('200). The Klass et al. device is an electrorheological device comprising an electrorheological fluid 60 and an electrode configuration (10, 14, 18, 22 and 12, 16, 20, 24) arranged such that an electric field is generated having a significant component parallel to the direction of an anticipated external stress field. The electrode configuration comprises a plurality of positive and negative electrodes (10, 14, 18, 22 and 12, 16, 20, 24) disposed on an insulating substrate 26. The electrodes are disposed on the substrate so as to provide a series of equidistantly spaced, alternately positive and negative electrodes in the direction of the external stress field.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlson('593) in view of Klass et al.('200) . The Carlson device is an electrorheological clutch having a cylindrical drive member 14 having electrode strips 38 disposed thereon. The strips in Carlson, however, are not alternating polarity as claimed and thus would not generate a significant component perpendicular to the axis of rotation and parallel to the surface of the members. The Klass et al. device is an electrorheological device comprising an electrorheological fluid 60 and an electrode

configuration (10, 14, 18, 22 and 12, 16, 20, 24) arranged such that an electric field is generated having a significant component parallel to the direction of an anticipated external stress field. The electrode configuration comprises a plurality of positive and negative electrodes (10, 14, 18, 22 and 12, 16, 20, 24) disposed on an insulating substrate 26. The electrodes are disposed on the substrate so as to provide a series of equidistantly spaced, alternately positive and negative electrodes in the direction of the external stress field. The Klass et al. device shows a planar electrorheological device for coupling to block 62, but discloses that the device could be cylindrical for coupling to a cylindrical object. It would have been obvious from Klass et al. to modify Carlson to have alternating positive and negative electrode strips, the motivation being to provide the improved coupling taught by Klass et al.

Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlson('593) in view of Klass et al.('200) as applied to claims 3-5 above, and further in view of Kasahara('461). It is unclear from Klass et al. whether the electrodes extend from opposite ends and are of equal length. Kasahara shows an electrode arrangement in Fig. 4 wherein positive and negative electrodes extend from opposite directions on cylindrical member 26. In incorporating the Klass et al. electrode configuration in Carlson, it would have been obvious, in further view of Kasahara, to extend the electrodes from opposite directions and provide the electrodes of equal length, the motivation being to achieve uniform field strength throughout the length of the cylindrical member.

Allowable Subject Matter

Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

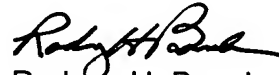
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nuber('678) is cited to show a device using an electrorheological fluid as a chuck or a brake.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney H. Bonck whose telephone number is (571) 272-7089. The examiner can normally be reached on Monday-Friday 7:00AM - 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on (571) 272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3681

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Rodney H. Bonck
Primary Examiner
Art Unit 3681

rhb
October 14, 2005